

Projections of Hospital-based Healthcare Demand due to COVID-19 in Los Angeles County

June 17, 2020 Update

County DHS COVID-19 Predictive Modeling Team:

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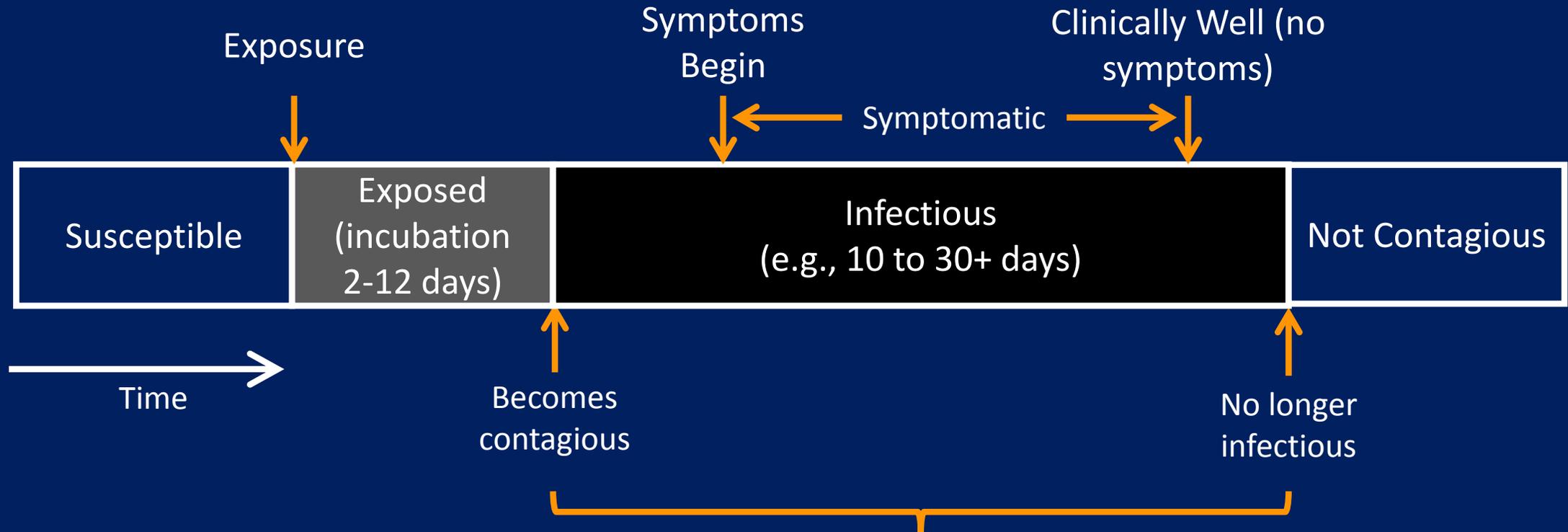
1. Los Angeles County, Department of Health Services
2. Los Angeles County, Department of Public Health
3. Los Angeles County, Office of the Chief Information Officer
4. Berry Consultants, LLC, Austin, TX
5. University of California, Los Angeles



Key Findings of the June 17th Update

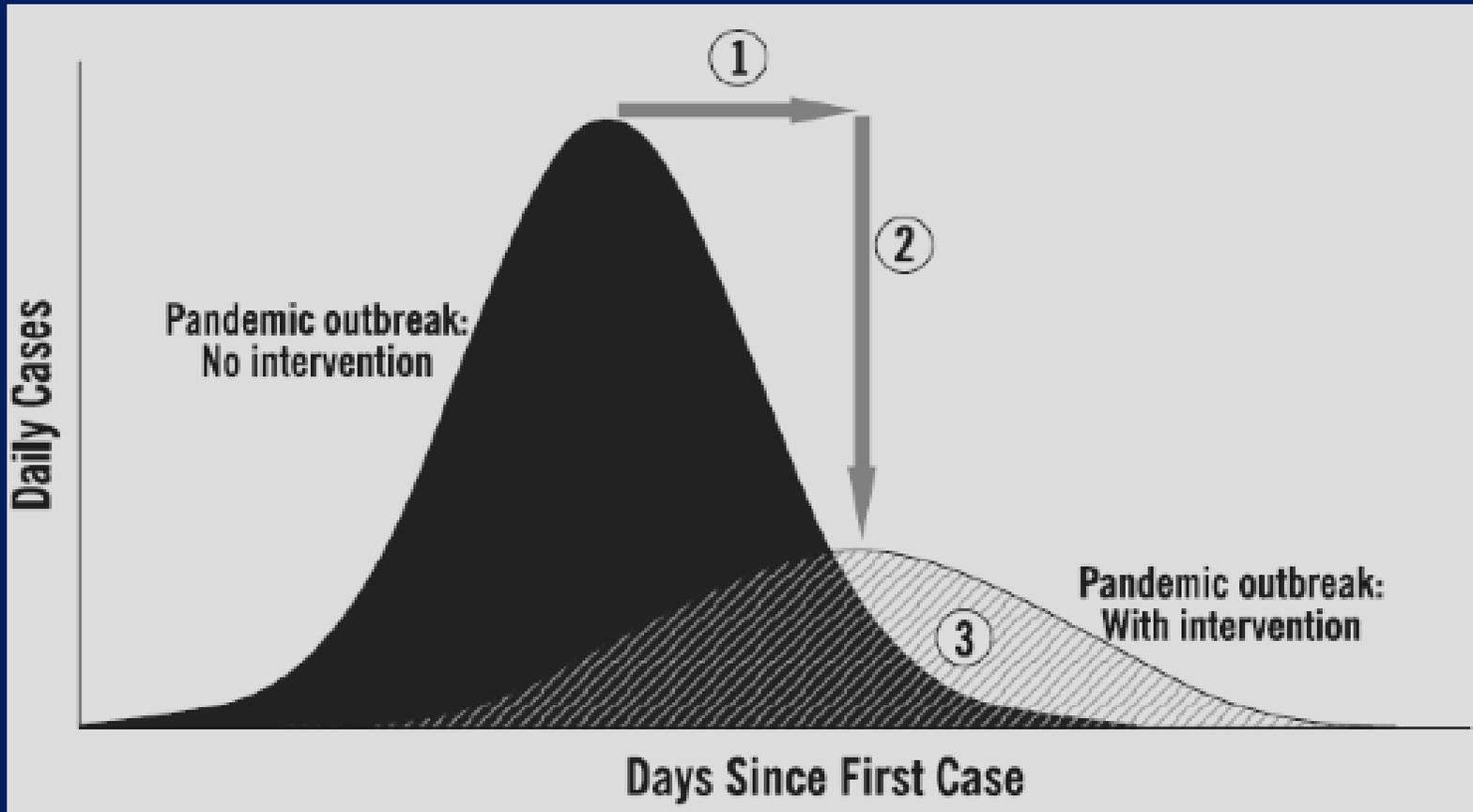
- This update includes data on hospital visits and volume through June 14, 2020.
- The model allows for changes in transmission associated with relaxation of physical distancing requirements. The total number of persons infected during the epidemic, assuming differences in future transmission, is determined through December 1, 2020.
- Key findings:
 - The overall volume of hospital-based care for patients with COVID-19 appears generally stable, although the number of daily new cases requiring hospitalization is slightly higher than it was 2 to 3 weeks ago. This is within the range of uncertainty of the prior predictions.
 - After appearing to rise slightly, the effective transmission number (“R”) now appears to be stable and slightly greater than 1, reflecting transmission 2 to 4 weeks ago.
 - It is not yet known with certainty what effect the relaxation of physical distancing requirements will have on transmission of COVID-19. Most likely, we have not yet seen the effect, if any, of protest activity on transmission.
 - The number of hospital beds and ventilators in Los Angeles County appears adequate to meet the projected need for the care of additional COVID-19 patients over the next 4 weeks. The number of ICU beds is more limited and may become inadequate if transmission increases.

A Patient's Journey | COVID-19



Goal of physical distancing, public use of cloth face coverings, quarantine, isolation and similar actions is to reduce the number of new susceptible people exposed during this time

Goal of Public Health Response

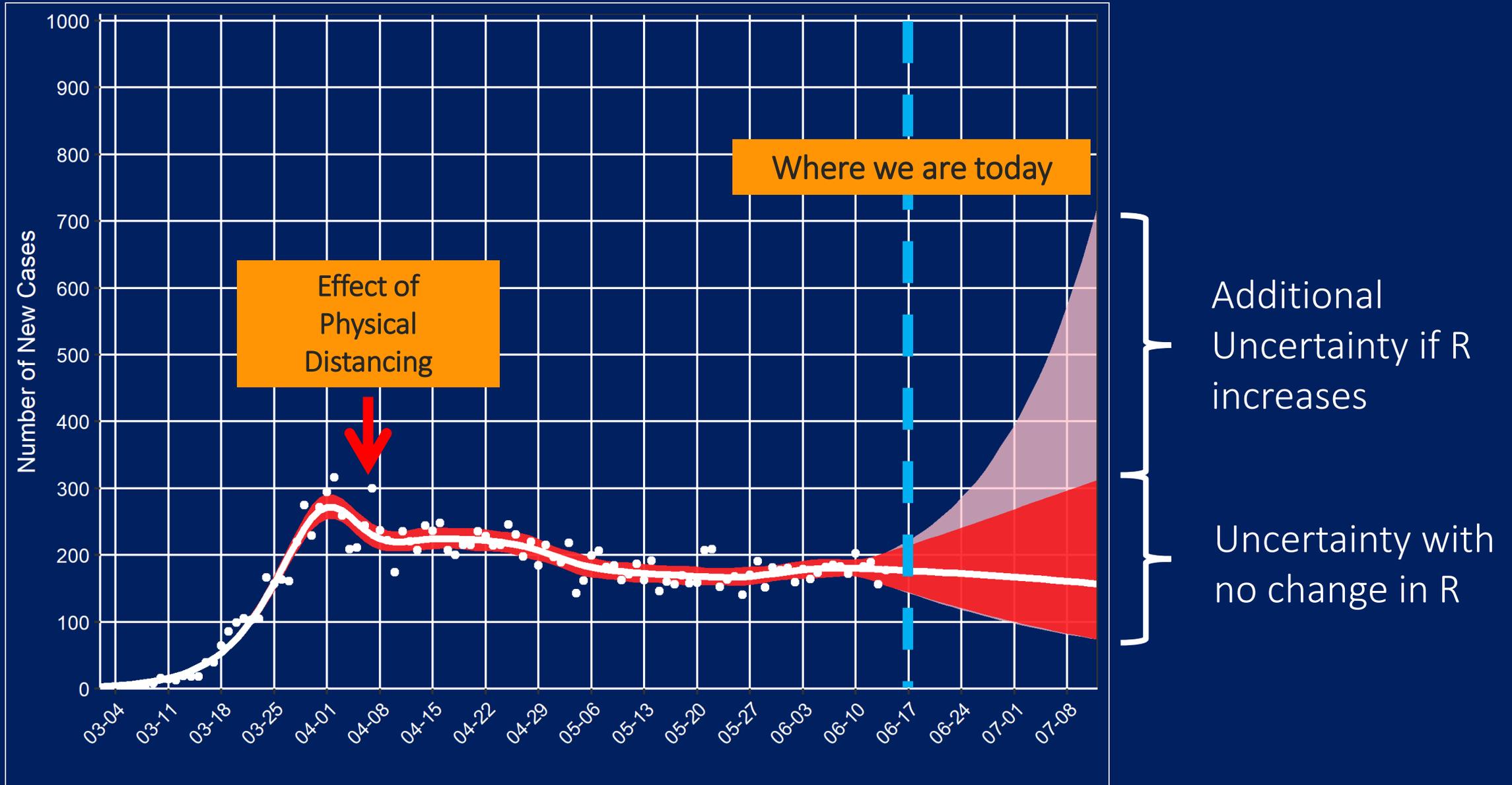


Effects of physical distancing & public health interventions:

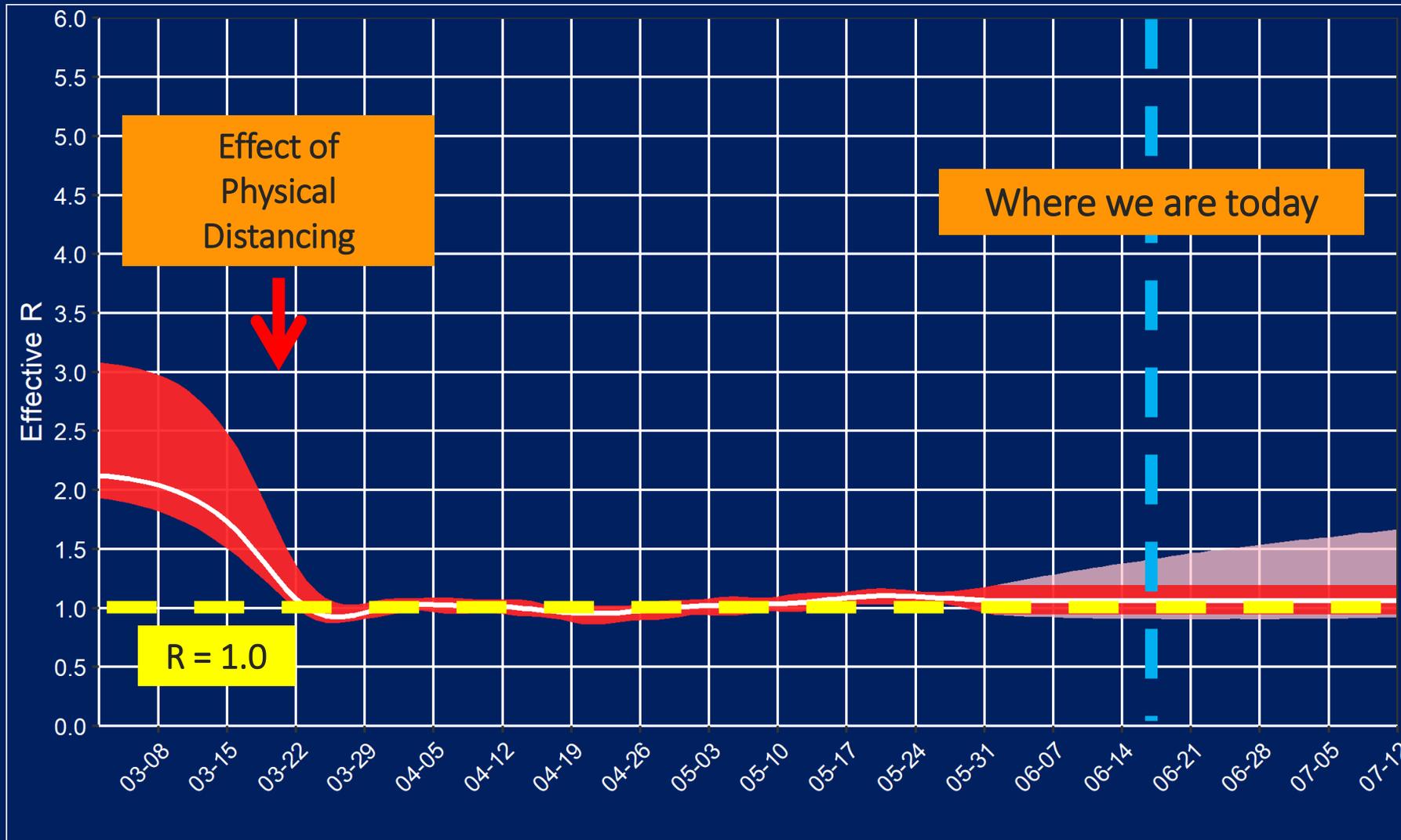
1. Delay peak in demand, increased time to prepare
2. Decrease peak demand, increased ability to surge
3. Decrease total population infected

Source: CDC 2007

Hospital Patient Projections



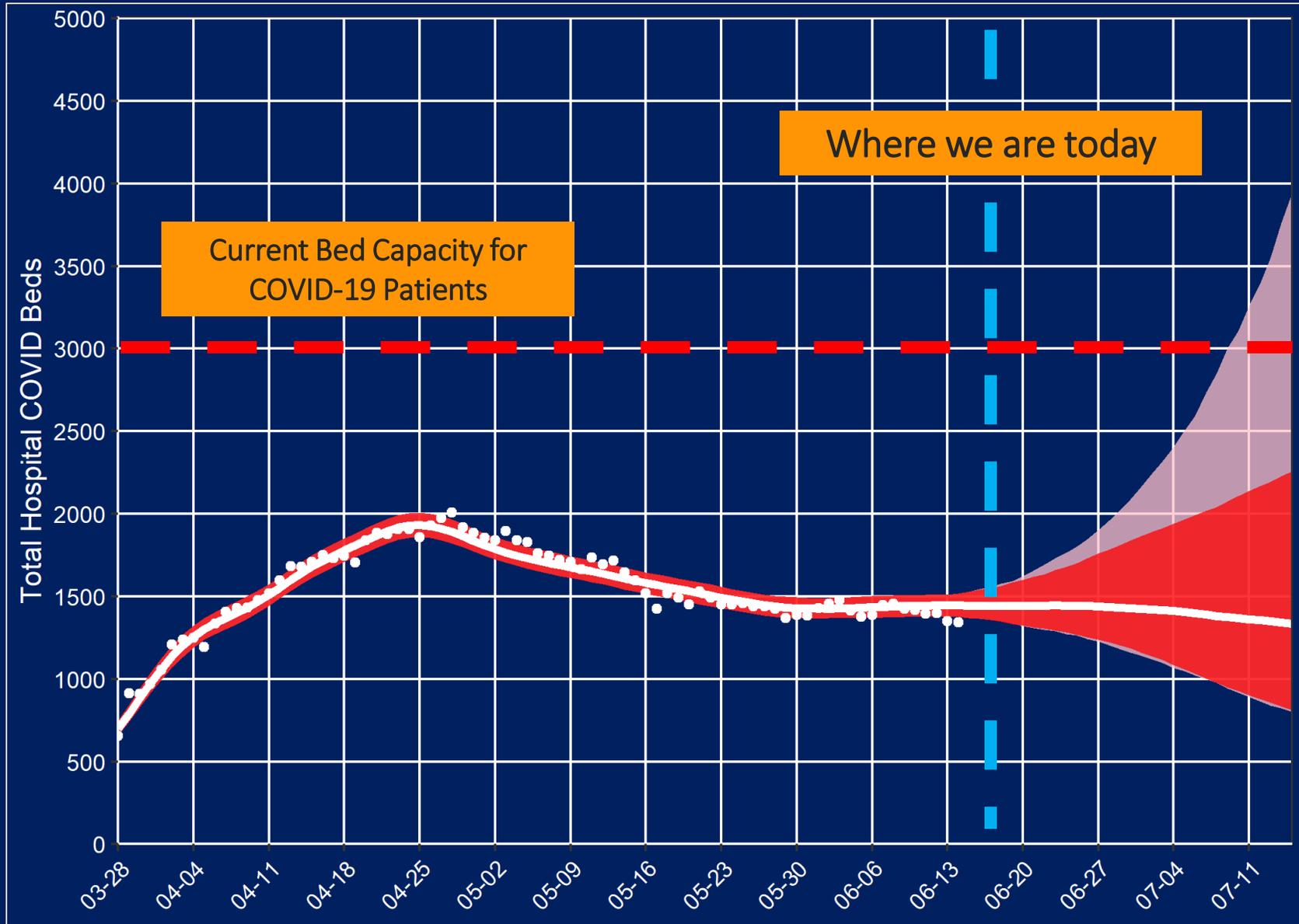
Effective Transmission Number "R"



Additional
Uncertainty if R is
increasing

Uncertainty with
no change in R

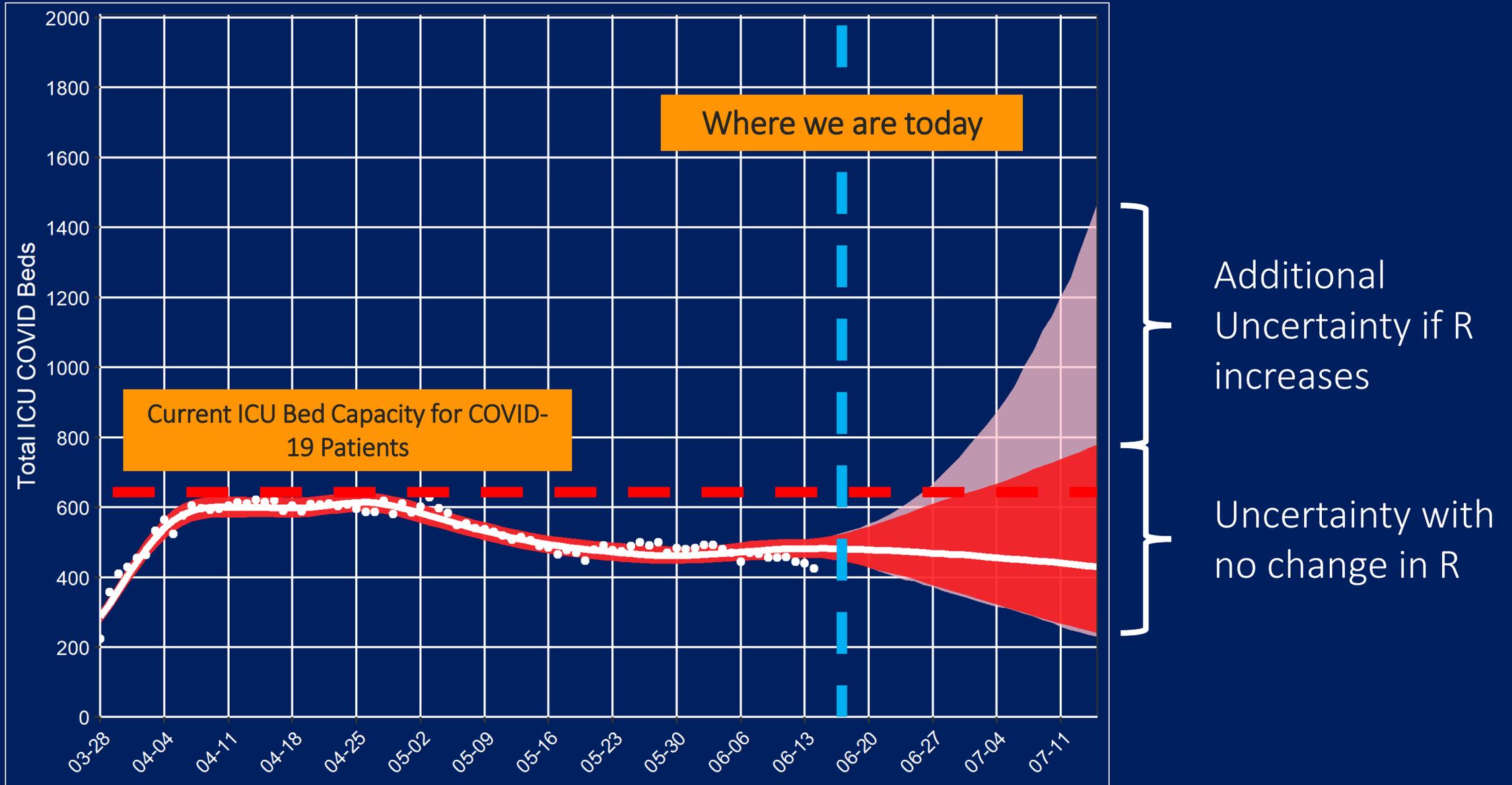
Predictions of Demand in LA County | Hospital Beds



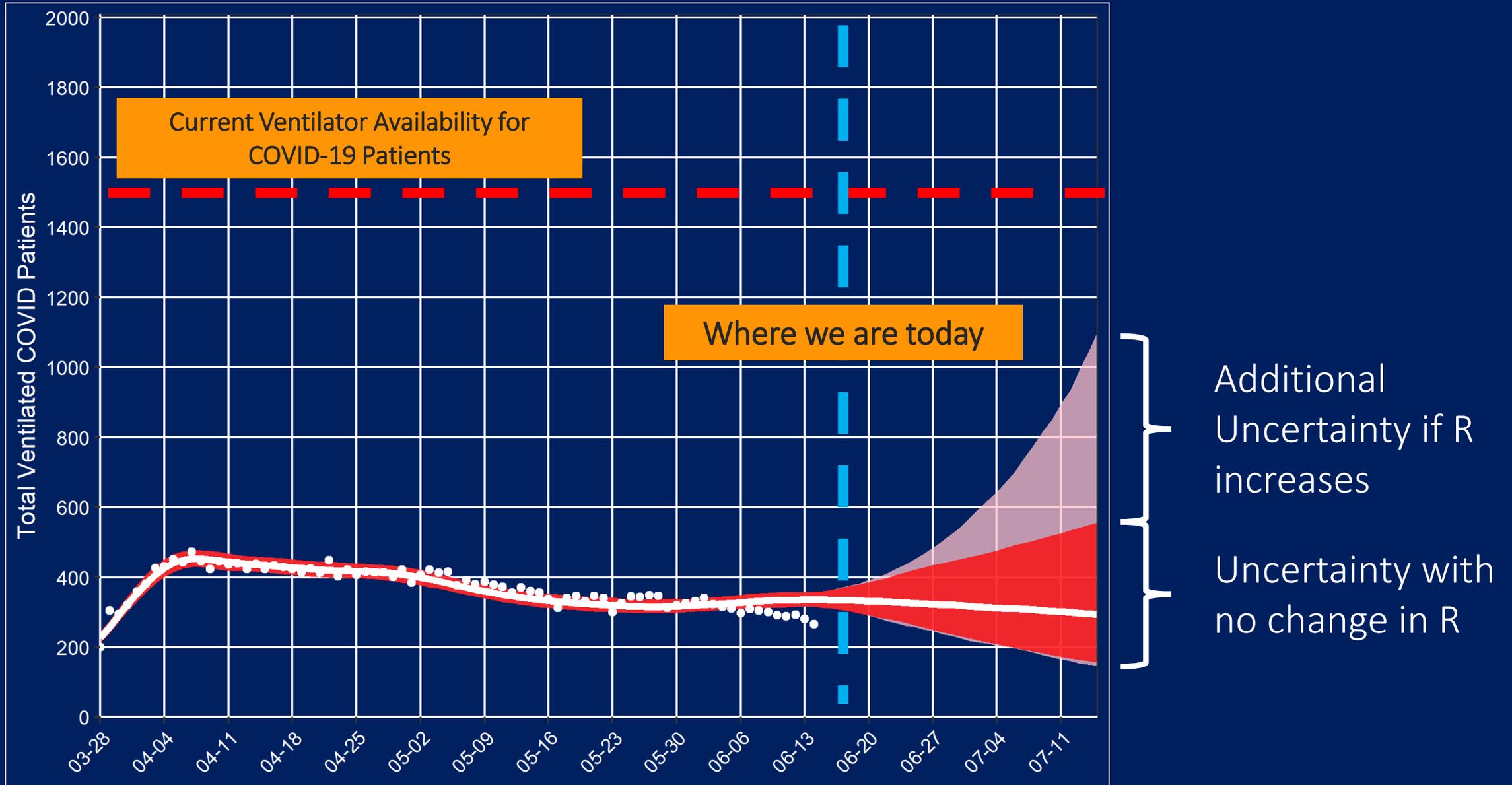
Additional
Uncertainty if R
increases

Uncertainty with
no change in R

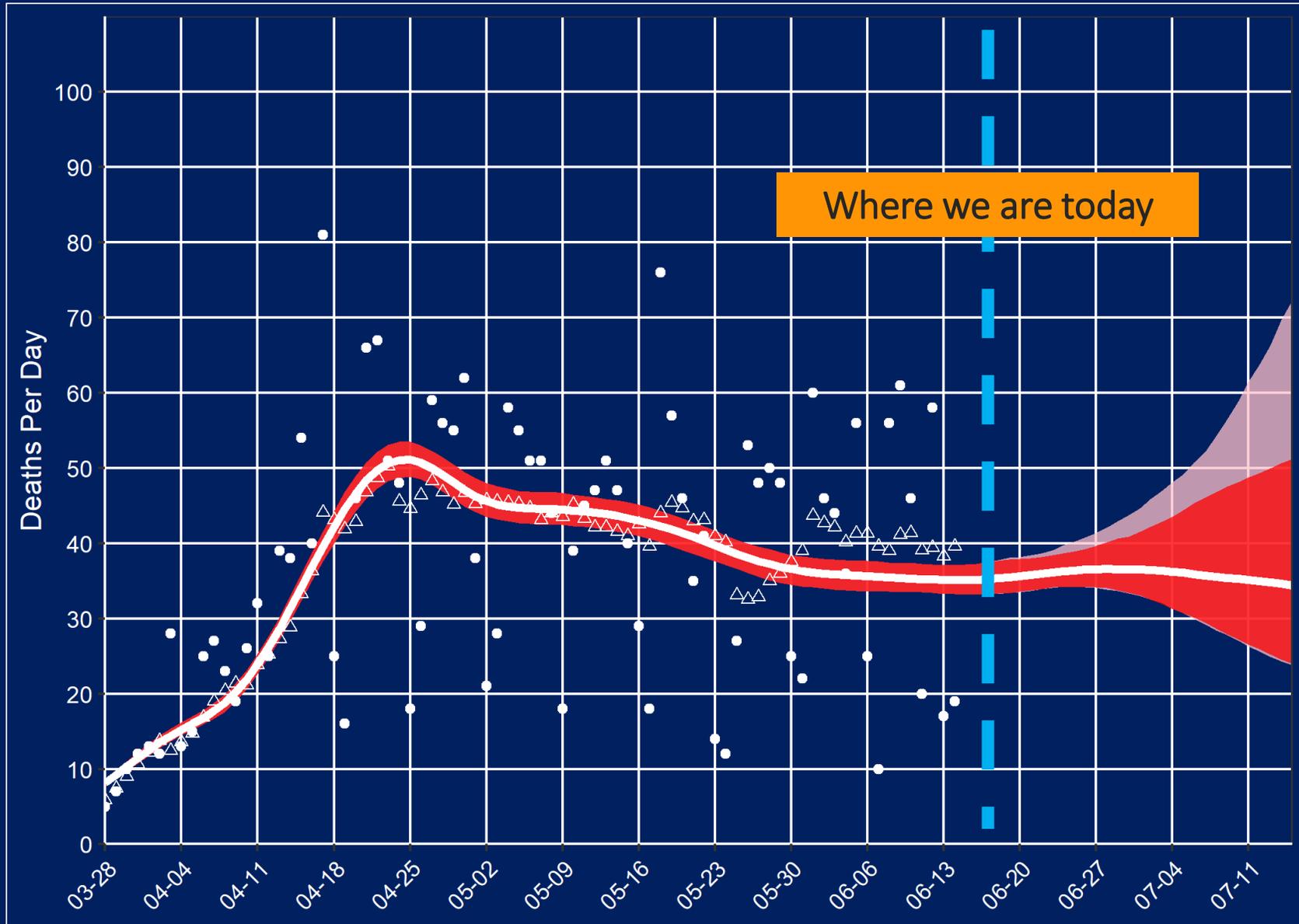
Predictions of Demand in LA County | ICU Beds



Predictions of Demand in LA County | Ventilators



Predictions of Daily Mortality LA County



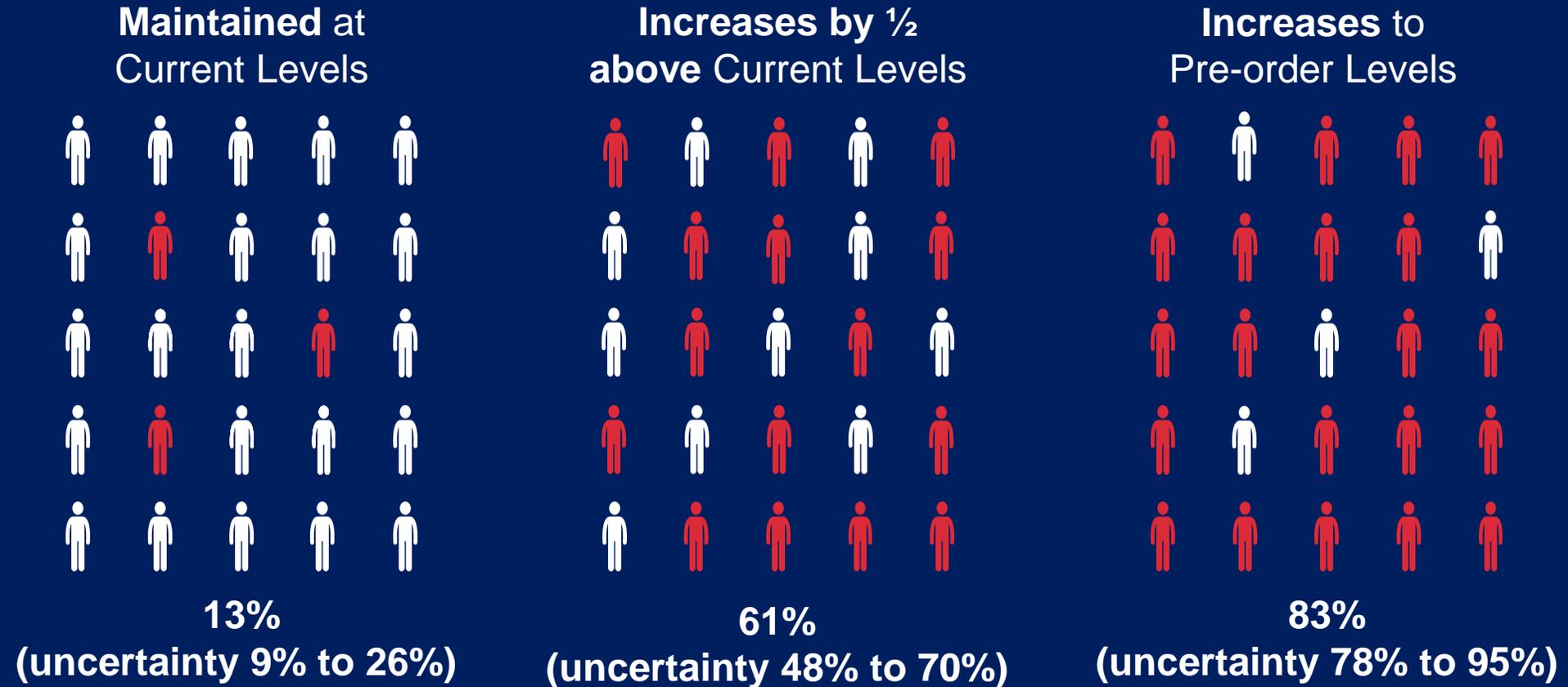
Where we are today

Additional
Uncertainty if R
increases

Uncertainty with
no change in R

Effect of Behaviors to Control Transmission

If transmission....



... of LA County residents will have been infected by December 1, 2020 *

**(This includes adults and children)*